

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A radiation-emitting semiconductor component ~~with~~  
comprising:  
a semiconductor body that includes a first principal surface[[ (5)]], a second principal surface[[ (9)]] and a semiconductor layer sequence[[ (4)]] with an electromagnetic radiation generating active zone[[ (7)]], said semiconductor layer sequence[[ (4)]] being disposed between the first and the second principal surfaces[[ (5, 9)]], ~~characterized in that~~ wherein the radiation-emitting semiconductor component further comprises:  
a first current spreading layer ~~(3)~~ is disposed on said first principal surface[[ (5)]] and [[is]] electrically conductively connected to said semiconductor layer sequence[[ (4)]]; and  
a second current spreading layer ~~(10)~~ is disposed on said second principal surface [[ (9)]] and [[is]] electrically conductively connected to said semiconductor layer sequence[[ (4)]].
2. (Currently Amended) The radiation-emitting semiconductor component as in claim 1,  
~~characterized in that~~ wherein at least one of said two principal surfaces[[ (5, 9)]]  
comprising said current spreading layers[[ (3, 10)]] has a microstructure[[ (12)]].
3. (Currently Amended) The radiation-emitting semiconductor component as in claim 1  
[[or 2]], ~~characterized in that~~ wherein at least one of said current spreading layers[[ (3, 10)]]  
contains a material that is transparent to the generated radiation.
4. (Currently Amended) The radiation-emitting semiconductor component as in ~~one of~~  
~~claims 1 to 3~~ claim 2, ~~characterized in that~~ wherein both current spreading layers[[ (3, 10)]]  
contain a material that is transparent to the generated radiation.

5. (Currently Amended) The radiation-emitting semiconductor component as in claim 3 [[or 4]], ~~characterized in that~~ wherein-said radiation-transparent material contains an oxide.

6. (Currently Amended) The radiation-emitting semiconductor component as in claim 5, ~~characterized in that~~ wherein said oxide is a metal oxide.

7. (Currently Amended) The radiation-emitting semiconductor component as in ~~one of~~ ~~claims 3 to 6~~ claim 3, ~~characterized in that~~ wherein said radiation-transparent material contains ITO and/or InO.

8. (Currently Amended) The radiation-emitting semiconductor component as in ~~one of~~ ~~claims 3 to 6~~ claim 3, ~~characterized in that~~ wherein-said radiation-transparent material contains ZnO.

9. (Currently Amended) The radiation-emitting semiconductor component as in ~~one of~~ ~~claims 3 to 6~~ claim 3, ~~characterized in that~~ wherein said radiation-transparent material contains SnO.

10. (Currently Amended) The radiation-emitting semiconductor component as in ~~one of~~ ~~claims 1 to 9~~ claim 1, ~~characterized in that~~ wherein at least one of said current spreading layers [[(3, 10)]] contains Al, Ga, In, Ce, Sb and/or F.

11. (Currently Amended) The radiation-emitting semiconductor component as in ~~one of~~ ~~claims 1 to 10~~ claim 1, ~~characterized in that~~ wherein disposed on at least one of said current spreading layers[[ (3, 10)]] is a mirror layer[[ (2)]].

12. (Currently Amended) The radiation-emitting semiconductor component as in claim 11, ~~characterized in that~~ wherein said mirror layer[[ (2)]] is disposed on the side of said current spreading layer[[ (3)]] facing away from said semiconductor layer sequence[[ (4)]].

13. (Currently Amended) The radiation-emitting semiconductor component as in claim 11[[ or 12]], ~~characterized in that~~ wherein said mirror layer[[ (2)]] is electrically conductive.

14. (Currently Amended) The radiation-emitting semiconductor component as in ~~one of claims 11 to 13~~ claim 11, ~~characterized in that~~ wherein said mirror layer[[ (2)]] contains a metal.

15. (Currently Amended) The radiation-emitting semiconductor component as in ~~one of claims 11 to 14~~ claim 11, ~~characterized in that~~ wherein said mirror layer[[ (2)]] contains Au, Ag, Al and/or Pt.

16. (Currently Amended) The radiation-emitting semiconductor component as in ~~one of claims 11 to 15~~ claim 11, ~~characterized in that~~ wherein said principal surface[[ (9)]] has a microstructure[[ (12)]] on the side of said semiconductor layer sequence[[ (4)]] facing away from said mirror layer[[ (2)]].

17. (Currently Amended) The radiation-emitting semiconductor component as in ~~one of claims 1 to 16~~ claim 1, ~~characterized in that~~ wherein said semiconductor layer sequence[[ (4)]] contains at least one n- and/or p-conductive layer[[ (6, 8)]].

18. (Currently Amended) The radiation-emitting semiconductor component as in claim 17, ~~characterized in that~~ wherein the thickness of said n-conductive and/or said p-conductive layer[[ (6, 8)]] is in the range of a monolayer to 1000 nm, ~~is preferably less than 400 nm and particularly preferably is between 150 nm and 350 nm.~~

19. (Currently Amended) The radiation-emitting semiconductor component as in claim 17 ~~or 18, characterized in that~~ wherein the current spreading layer on the side comprising the p-conductive layer of the semiconductor layer sequence contains ZnO and preferably Al.

20. (Currently Amended) The radiation-emitting semiconductor component as in ~~one of~~ claims 17 to 19 claim 17, ~~characterized in that~~ wherein the current spreading layer on the side comprising the n-conductive layer of the semiconductor layer sequence contains SnO ~~and preferably Sb~~.

21. (Currently Amended) The radiation-emitting semiconductor component as in ~~one of~~ claims 1 to 20 claim 1, ~~characterized in that~~ wherein said radiation-emitting semiconductor component is affixed to a carrier[[ (1)]]].

22. (Currently Amended) The radiation-emitting semiconductor component as in claim 21, ~~characterized in that~~ wherein said carrier[[ (1)]] contains GaAs.

23. (Currently Amended) The radiation-emitting semiconductor component as in claim 21[[ or 22]], ~~characterized in that~~ wherein said radiation-emitting semiconductor component is affixed to said carrier by means of a solder metallization ~~(11) that preferably directly adjoins said carrier (1)~~.

24. (Currently Amended) The radiation-emitting semiconductor component as in claim 11 ~~claims 11 and 23, characterized in that said~~, wherein a solder metallization[[ (11)]] is disposed on said mirror layer[[ (2)]] to affix said radiation-emitting semiconductor component to a carrier.

25. (Currently Amended) The radiation-emitting semiconductor component as in ~~one of claims 1 to 24~~ claim 1, ~~characterized in that~~ wherein disposed on a current spreading layer [[ (10)]] is a contact surface[[ (13)]] for electrical contacting.

26. (Currently Amended) The radiation-emitting semiconductor component as in claim 25, ~~characterized in that~~ wherein said contact surface[[ (13)]] is disposed on the side of said semiconductor layer sequence[[ (4)]] opposite to said carrier[[ (1)]].

27. (Currently Amended) The radiation-emitting semiconductor component as in claim 25[[ or 26]], ~~characterized in that~~ wherein said contact surface[[ (13)]] has on the side facing said semiconductor layer sequence[[ (4)]] a layer that reflects the generated radiation.

28. (Currently Amended) The radiation-emitting semiconductor component as in claim 1, ~~one of claims 1 to 24~~, ~~characterized in that~~ wherein at least one of said current spreading layers[[ (3, 10)]] comprises a recess[[ (15)]].

29. (Currently Amended) The radiation-emitting semiconductor component as in claim 28, ~~characterized in that~~ wherein disposed in said recess[[ (15)]] is an electrically conductive contact surface[[ (13)]].

30. (Currently Amended) The radiation-emitting semiconductor component as in claim 29, ~~characterized in that~~ wherein the electrical contacting of said radiation-emitting semiconductor component takes place via said contact surface[[ (13)]].

31. (Currently Amended) The radiation-emitting semiconductor component as in claim 30, ~~characterized in that~~ wherein disposed on the side of said current spreading layer [[ (10)]] facing said semiconductor layer sequence[[ (4)]] and provided with said recess[[ (15)]] and said contact surface[[ (13)]] is a jacket layer or a jacket layer sequence[[ (14)]].

32. (Currently Amended) The radiation-emitting semiconductor component as in claim 31, ~~characterized in that~~ wherein said jacket layer or jacket layer sequence[[ (14)]] is poorly electrically conductive with respect to said contact surface[[ (13)]], such that the current partially flows into said current spreading layer[[ (10)]].

33. (Currently Amended) The radiation-emitting semiconductor component as in ~~one of claims 1 to 32~~ claim 1, ~~characterized in that~~ wherein said semiconductor layer sequence[[ (4)]] contains a III/V semiconductor, preferably  $\text{In}_x\text{Ga}_y\text{Al}_{1-x-y}\text{P}$ , where  $0 \leq x \leq 1$ ,  $0 \leq y \leq 1$  and  $x + y \leq 1$ ,  $\text{In}_x\text{Ga}_y\text{Al}_{1-x-y}\text{N}$ , where  $0 \leq x \leq 1$ ,  $0 \leq y \leq 1$  and  $x + y \leq 1$ , or  $\text{In}_x\text{Ga}_y\text{Al}_{1-x-y}\text{As}$ , where  $0 \leq x \leq 1$ ,  $0 \leq y \leq 1$  and  $x + y \leq 1$ .

34. (Currently Amended) The radiation-emitting semiconductor component as in ~~one of claims 1 to 33~~ claim 1, ~~characterized in that~~ wherein said first current spreading layer contains ZnO and on the side nearest said semiconductor body adjoins a p-conductive AlGaAs-containing layer.

35. (Currently Amended) A method for producing a radiation-emitting semiconductor component with a semiconductor body, including a first principal surface [[(5)], a second principal surface[[ (9)]] and a semiconductor layer sequence[[ (4)]] with an electromagnetic radiation generating active zone[[ (7)]], said semiconductor layer sequence[[ (4)]] being disposed between the first and the second principal surfaces[[ (5, 9)]], ~~characterized by the steps of the~~ method comprising:

- growing said semiconductor layer sequence[[ (4)]] on a substrate[[ (16)]];
- applying a radiation-transparent current spreading layer[[ (3)]] to said first principal surface[[ (5)]];
- removing said substrate[[ (16)]];
- applying a radiation-transparent current spreading layer[[ (10)]] to said second principal surface[[ (9)]].

36. (Currently Amended) The method for producing a radiation-emitting semiconductor component as in claim 35, ~~characterized in that~~ wherein a mirror layer[[ (2)]] is applied to said current spreading layer on said first principal surface[[ (5)]] and said semiconductor body is preferably affixed on the side with said mirror layer[[ (2)]] to a carrier[[ (1)]].

37. (Currently Amended) The method for producing a radiation-emitting semiconductor component as in claim 35[[ or 36]], ~~characterized in that~~ wherein the growth of said semiconductor layer sequence[[ (4)]] is effected epitaxially.

38. (Currently Amended) The method for producing a radiation-emitting semiconductor component as in ~~one of claims 35 to 37~~ claim 35, ~~characterized in that~~ wherein said current spreading layers[[ (3, 10)]] are applied by sputtering.

39. (Currently Amended) The method for producing a radiation-emitting semiconductor component as in ~~one of claims 36 to 38~~ claim 36, ~~characterized in that~~ wherein said mirror layer [[(2)]] is applied by sputtering or vapor deposition.

40. (Currently Amended) The method for producing a radiation-emitting semiconductor component as in ~~one of claims 35 to 39~~ claim 35, ~~characterized in that~~ wherein before the application of said current spreading layers[[ (3, 10)]], a microstructure[[ (12)]] is applied or built into or onto at least one of said principal surfaces[[ (5, 9)]].

41. (Currently Amended) The method for producing a radiation-emitting semiconductor component as in ~~one of claims 35 to 40~~, claim 35 ~~characterized in that~~ wherein a jacket layer sequence[[ (14)]] is applied between at least one current spreading layer[[ (3, 10)]] and the adjacently disposed principal surface[[ (5, 9)]] and comprises a recess[[ (15)]] in which said electrical contact surface[[ (13)]] is constructed.

42. (New) The radiation-emitting semiconductor component as in claim 18, wherein the thickness of said n-conductive and/or said p-conductive layer is less than 400 nm.

43. (New) The radiation-emitting semiconductor component as in claim 42, wherein the thickness of said n-conductive and/or said p-conductive layer is between 150 nm and 400 nm.

44. (New) The radiation-emitting semiconductor component as in claim 17, wherein the current spreading layer on the side comprising the n-conductive layer of the semiconductor layer sequence contains SnO and Sb.